FEDERAL ENERGY REGULATORY COMMISSION
WASHINGTON, DC 20426

OFFICE OF THE CHAIRMAN

September 2, 2003

The Honorable John D. Dingell
Ranking Member
Committee on Energy and Commerce
U.S. House of Representatives
Washington, D.C. 20515-6115

Re: Responses to Questions Regarding the August 14, 2003 Electrical Outage

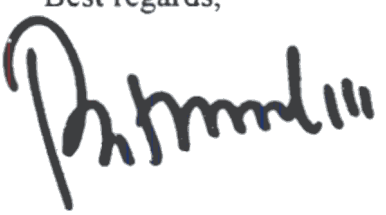
Dear Congressman Dingell

Thank you for your August 22, 2003 letter concerning the August 14, 2003 electricity outage which affected eight states, including Michigan, and portions of Canada. I share your interest and that of Chairman Tauzin in quickly determining the cause of the outage and look forward to testifying tomorrow before the Committee.

As you know, the Commission is participating in the President's Blackout 2003 Task Force, together with other U.S. agencies and organizations, as well as Canada's Ministry of Natural Resources. I am confident that the collaborative work of the Department of Energy, the Commission, the Department of Homeland Security, the Nuclear Regulatory Commission, the North American Electric Reliability Council, and the Canadian Ministry of Natural Resources will identify the causes of the blackout and lead to substantive and workable cross-cutting recommendations for preventing future disruptions.

In your letter, you asked five specific questions and enclosed are my responses to those questions. If I can be of further assistance on this or any other Commission matter, please do not hesitate to contact me.

Best regards,



Pat Wood, III
Chairman

Enclosure

RESPONSES TO QUESTIONS FROM THE HONORABLE JOHN D. DINGELL

Question 1: In a release dated August 19, 2003, the Department of Energy (DOE) provided details about the composition of the "US-Canada Task Force" established to investigate the recent electricity outages. Although that announcement did not specify that the Federal Energy Regulatory Commission (FERC) would be involved, your statement of August 20, 2003, indicates the Commission already was involved and would continue its "close coordination" with DOE and the Task Force.

The August 20 announcement also indicates that "FERC has numerous technical experts and other staff working on the blackout event and recovery, and we have committed these professionals to assist the Energy Department investigation. The Commission will make available whatever resources are required to support the investigation."

Question 1a: Please describe the statutory authority that governs FERC's involvement in the Task Force, including commitment of staff and other resources.

Answer: The Federal Energy Regulatory Commission (FERC) is contributing to the investigation pursuant to statutory authorities under the Federal Power Act (FPA) and Public Utility Regulatory Policies Act of 1978 (PURPA). Specifically, FPA section 307(a) authorizes FERC to "investigate any facts, conditions, practices, or matters" necessary for, among other things, "prescribing rules or regulations thereunder, or in obtaining information to serve as a basis for recommending further legislation concerning the matters to which this Act relates." FPA section 311 provides that "[i]n order to secure information necessary or appropriate as a basis for recommending legislation, the Commission is authorized and directed to conduct investigations regarding the generation, transmission, distribution and sale of electric energy . . . ." FPA section 311 also directs FERC to "secure and keep current information regarding the ownership, operation, management, and control of all facilities for such generation, transmission, distribution, and sale" and "the capacity and output thereof" and the "relation of any or all such facts to the development of navigation, industry, commerce, and the national defense." Finally, FPA section 311 provides that FERC "shall report to Congress the result of investigations made under the authority of this section." FPA section 309 states that "[t]he Commission shall have power to perform any and all acts . . . as it may find necessary or appropriate to carry out the provisions of this Act."

PURPA 209(b) states that DOE, in consultation with FERC, may from time to time request the reliability councils or other appropriate persons (including Federal agencies) to examine and report concerning any electric utility reliability issue. PURPA 209(c) states that DOE, in consultation with FERC, and after public comment, may

recommend industry standards for reliability to the electric utility industry, including standards with respect to equipment, operating procedures, and training of personnel.

Question 1b: How was the decision made to involve FERC in the Task Force, and by whom?

Answer: The Department of Energy (DOE) proposed that FERC participate in the Task Force. In the interest of facilitating a coordinated, comprehensive investigation, I agreed with DOE's proposal.

Question 1c: Please outline the number of FERC personnel you expect to be involved in the Task Force, and the roles they, you, and other commissioners plan to take in the work of the Task Force.

Answer: At this time, six FERC staff members, including electrical engineers, are participating in the Task Force. Also, one staff member is co-chair of the Electric System Working Group within the Task Force. Along with other members of the Task Force, these FERC staff members will gather necessary data and determine the cause(s) of the outages. The Task Force will then develop recommendations on how to prevent the recurrence of such an outage. As the need arises, the Commission will make available other FERC staff and resources required to support the investigation.

Although FERC staff is keeping the other FERC Commissioners and me informed of the Task Force's progress, we do not play any direct role in the Task Force's investigation.

Question 1d: To what degree will FERC's participation in the Task Force divert personnel that otherwise would be dedicated to work before the Commission?

Answer: In light of the statutory authorities cited above, FERC's participation in the Task Force is within the Commission's responsibilities. Finding the cause(s) of the blackout and identifying any improvements within our jurisdiction that can help prevent future blackouts is a priority for the Commission, given the widespread harm that results from such blackouts.

Question 2: Your August 20 announcement also indicates that FERC's involvement in the Task Force will entail efforts "to piece together reams of available transmission data" to determine the causes of the blackout.

Does this statement refer to data amassed by FERC? If so, under what statutory authority does the Commission collect and disseminate such information?

Answer: No, my statement did not refer to data amassed by FERC. Rather, it referred to the voluminous transmission data currently in the possession of the relevant grid operators. The Electric System Working Group of the Blackout 2003 Task Force, which includes FERC staff members, is gathering the data based in part on the above-cited statutory authorities. Other agencies such as the DOE have other statutory authorities that may permit them to gather and disclose documents or information. For example, the Federal Energy Administration Act, which is providing part of the authority for the working of the Task Force, allows disclosure notwithstanding the Freedom of Information Act (FOIA), 5 U.S.C. § 552, or the Trade Secrets Act, 18 U.S.C. § 1905. Both agencies, however, are committed to protecting from public disclosure any information that has implications that would threaten the security of our country. Further, every precaution will be taken to ensure that the integrity of the information will be maintained to the extent it is shared with non-Federal members.

Question 3: Please describe the role that the Commission (and the Federal Power Commission before it) played in inquiries into past significant power outages. In particular, did the Commission conduct its own investigation, or participate in any investigation conducted by industry or other government entities such as DOE? If so, please describe the Commission's actions and any reports or recommendations that resulted, either from its own investigation or any in which it participated.

Answer: The Federal Power Commission (FPC) and FERC played substantive roles in investigating several major power outages in the United States that occurred during the last 40 years, prior to the incident this year. The FPC led the investigation of the 1965 Northeast blackout. The FPC also conducted an investigation of the 1967 Pennsylvania-New Jersey-Maryland Interconnection power interruption. While the FPC launched the investigation of the 1977 Consolidated Edison power outage, the Department of Energy (DOE) subsequently stepped in and completed the investigation of this outage with the help of the Commission's staff. Finally, DOE led the investigation of the 1996 Western power outage with contributions from individuals at the Commission.

The Northeast Power Failure of November 9-10, 1965

On November 9, 1965, President Johnson directed the FPC to study the cause of the 1965 Northeast outage that had impacted 30 million people for periods ranging from a few minutes to 13 hours in all or portions of Connecticut, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, Vermont, and the Province of Ontario. In response, the FPC established an Advisory Panel On The Northeast Power Interruption consisting of experts from all segments of the industry, including the Tennessee Valley Authority, the Department of Interior, the National

Association of Regulatory Utility Commissioners, the National Energy Board of Canada, the General Electric Company, the Westinghouse Electric Corp., the Seattle Department of Lighting, the Central Electric Power Cooperative, the American Electric Power Co. Inc., the University of Wisconsin, the Hydro-Electric Power Commission of Ontario, the Pennsylvania-New Jersey-Maryland Interconnection, the Commonwealth Edison Company, and the Virginia Electric & Power Company.

FPC issued an interim report on December 6, 1965. FPC traced the origin of the power failure to the operation of a protective relay at the Beck No. 2 Hydroelectric Plant on the Niagara River in Ontario that caused a transmission line to trip which, in turn, caused power flows on four other lines to exceed the settings of their protective devices. This led to power flows that had been moving north in Ontario to suddenly move south into the United States creating a power surge and the widespread outage.

FPC issued its final report on July 19, 1967, and made a number of recommendations. These recommendations included: (1) the formation of strong regional organizations throughout the nation to coordinate the planning, construction, operation and maintenance of individual bulk power supply systems; (2) a review of critical transmission facilities and acceleration of needed transmission capacity additions; and (3) the reduction of the excessive number of control centers that impede taking the best corrective actions during emergencies. FPC also reported that it had submitted to the Congress a proposed "Electric Power Reliability Act of 1967" that would authorize FPC to play a role in accomplishing several of its recommendations.

In transmitting its 1967 report to the President, FPC addressed the question of whether a fundamental error had been made in permitting utility systems to be so dependent on other systems that the failure of one could jeopardize great areas of the country and conceivably the entire Nation. In this regard, FPC concluded:

> The various segments of the industry . . . are in agreement that the concept of coordinated efforts is not only a very successful means of achieving lower cost power, but actually enhances the reliability of participating systems. The key lesson of the Northeast failure and the subsequent cascading outages, we believe, is that these interconnections and the coordination of diverse systems must be strong in order to be effective.

Cover letter transmitting the final report to the President, at page

Pennsylvania-New Jersey-Maryland Interconnection Power Interruption June 5, 1967:

FPC launched an investigation of the Pennsylvania-New Jersey-Maryland Interconnection (PJM) power interruption of June 5, 1967 that had impacted 13 million people for periods ranging from one hour to 10 hours. During the course of its investigation, FPC formed an advisory panel of recognized leaders from the electric power industry and was assisted by the PJM utilities.

FPC issued its report on the power interruption in April 1968. The report noted that, at the time of the interruption, the PJM system was operating without the benefit of generation and transmission system additions, which had been planned for service by the summer of 1967, but which had not been completed as originally scheduled because of manufacturing delays, labor shortages and other construction problems.

The Consolidated Edison Power Failure of July 13-14, 1977

On July 14, 1977, President Carter directed FPC to undertake an investigation of the 1977 Consolidated Edison Company (ConEd) power failure that had impacted 8 million people in New York City and Westchester County for periods ranging from 5 hours to 25 hours. Although a preliminary report on the power failure was issued by FPC staff on August 4, 1977, DOE and FERC jointly issued the follow-up report in June 1978. Their involvement was prompted by the creation of DOE and the reorganization of FPC as FERC under the Department of Energy Organization Act during the ongoing investigation of the power failure. The June 1978 Report explained that the original FPC staff, which had since been moved to FERC, had continued their investigative work during the agency transition, even though the responsibility for power supply reliability matters had transferred to the Economic Regulatory Administration. The June 1978 Report also indicated FERC staff had reviewed the separate reports on the blackout issued by ConEd, the city of New York, the New York Public Service Commission, and the State of New York.

The June 1978 Report found the 1977 collapse of the ConEd system resulted from a combination of natural events, equipment malfunctions, questionable system design features, and operating errors that became apparent when protective equipment had operated improperly in response to lightning strikes at two extra-high voltage lines in northern Westchester County. Notably, the June 1978 Report found that the 1965 and 1977 power outages shared a similar progression of events:

> Although the . . . power failure of July 1977 was technically different from the 1965 event, the 1965 and 1977 events have an important feature in common: in both cases, a low probability event created an emergency in one sector of the system, and after that event, a combination of equipment malfunctions and incorrect operator actions allowed the emergency to grow

> to major proportions. It is not possible technologically to prevent an occasional localized power failure. It is possible technologically to reduce to an extremely low value the probability that such a contingency will lead to a system-wide failure, or to an extended interruption on a major portion of a large system . . .

June 1978 Report, page 2.

The June 1978 report concluded that ConEd's management was responsible for the inadequate performance of its equipment and operations. The report cited numerous management deficiencies and failures to have some generators on automatic control, to regularly verify the emergency capability of reserves, to report out-of-service generation, and to update plans and clarify procedures for restoring service after outages. The report made a number of specific recommendations, including: (1) strengthening of command and control capabilities in the energy control room; (2) clarification of channels of authority and terminology used in coordinated operations; (3) establishment of operating procedures to assure rapid correction of tie-line loadings in excess of their ratings; (4) development of procedures for automatic backup and under-frequency load shedding; (5) stricter compliance with the New York Power Pool's automatic generation control requirements; (6) development of a detailed restoration plan based on the experiences of the July power outage; and (7) development of better procedures for periodic testing of emergency power and black-start generation facilities.

The Electric Power Outage in the Western United States of July 2-3, 1996

On July 3, 1996, President Clinton directed DOE to report on the major power outages that occurred successively on July 2 and 3, 1996, that had impacted 2 million people for periods ranging from a few minutes to over 6 hours, in 14 Western states, two Canadian provinces and the northern portion of Baja California, Mexico. DOE issued its report on August 2, 1996. DOE noted the cooperation it had received from the Western Systems Coordinating Council (WSCC) and NERC during its inquiry. While DOE also acknowledged contributions to the development of the report from key individuals at FERC, the New England Power Pool and American Electric Power, DOE asserted responsibility for the findings, conclusions and recommendations contained in its report.

The August 1996 Report found the July 2, 1996 outage in the West was initiated when a transmission line between southwestern Wyoming and southeastern Idaho sagged too close to a tree, creating a short circuit and causing the line to disconnect automatically. A protective device on a parallel line disconnected its line. This then activated an automatic procedure to shut down two large generating units. Although the bulk power supply systems in the West were designed to be able to absorb these stresses,

the initial event propagated a sequence of events rippling across the entire Western power grid, interrupting service in 14 states. The bulk power system in the western Untied States and Canada automatically separated into five electrically separate geographic islands where service to some customers was cut off. A similar but smaller outage of about three hours duration occurred on July 2, 1996, but Idaho Power Company was able to limit the outage to its service territory.

In its August 1996 Report, DOE recommended that all users of the power grids must accept and operate under the planning and operating guidance developed by NERC and the regional councils, and provide NERC and the regional councils the resources, support, and the deference these organizations need in order to perform functions that are in the public interest.

Question 4: The Federal Power Act provides FERC broad authority to conduct independent investigations into significant events, such as the recent power outages, that bear on its regulatory responsibilities and legislative recommendations to Congress.

Question 4a: Why has FERC not undertaken its own independent investigation of the blackout? Is it not important that the Commission use its investigative authority to ascertain whether its policies, such as Order 2000 which encourages transmission owners to join regional transmission organizations (RTOs) and its pending Standard Market Design (SMD) rule, are adequate in light of this breakdown of the interstate transmission system?

Answer: Rather than conducting a duplicative investigation, FERC is participating in a single, comprehensive investigation of the blackout coordinated by the joint Blackout 2003 Task Force. The collaborative work among the DOE, FERC, the Department of Homeland Security, the Nuclear Regulatory Commission, NERC and the Canadian Ministry of Natural Resources will quickly identify the cause(s) of the power outage and lead to recommendations for preventing future outages. The joint investigation will also allow the Task Force members to consider the policies of all relevant entities, including individual states and Canada.

Since I was named FERC's Chairman two years ago, the Commission has emphasized the importance of developing sufficient energy infrastructure, including enhancing the Nation's electric transmission system. I also believe that the Commission's recent efforts to encourage the development of regional transmission organizations (RTOs) will help prevent future outages. Interconnected transmission systems require regional coordination and planning. The cascading nature of the August 14 blackout underscores the fact that the electric transmission system needs regional

coordination (both interstate and international) and planning, including better information and incentives to prevent future recurrences.

Question 4b: To the extent FERC expects its legislative recommendations on grid improvement to be credible, is not an independent Commission investigation appropriate and indeed required under section 311 of the Act in light of the blackout?

Answer Please refer to the answer to Question 4a.

Question 4c: Did DOE or anyone else in the Administration or elsewhere suggest, advise, or pressure FERC against conducting its own independent investigation into the blackouts?

Answer: No.

Question 5: In your March 5, 2003 testimony before the Subcommittee on Energy and Air Quality, you noted that a January 2003 proposed Commission policy statement on rate incentives for transmission expansion would permit a higher return on equity when a utility participates in an RTO, sells its RTO-operated transmission assets to an independent company, or pursues certain other specific measures.

Some utilities, notably those operating in Virginia and Kentucky, face constraints under state law with respect to participation in RTOs. Does the Commission's proposed transmission incentive policy undermine the reliability of the grid by denying such utilities an opportunity to earn higher rates of return? Specifically, to the extent that such utilities' lines are used not only to serve their own customer base but also to facilitate wholesale transmission for others, does not such a restriction on incentive rates contradict FERC's stated goal of making the grid more robust?

Answer: I do not believe that the Commission's policy undermines the reliability of the grid. To the contrary, the Commission's policy recognizes that the best way to expand the grid is to plan on a regional basis. The electricity grid is truly regional in nature. A regional approach to planning and expansion is required to ensure that the most cost-effective solutions are identified and that separate investments of individual utilities do not work at cross purposes. This type of regional planning is most effectively implemented by independent RTOs and ISOs. Efficient planning and expansion requires that all options be considered, including investment in transmission, generation, energy efficiency and demand response. Because they are independent of market participants, RTOs and ISOs ensure that each option is fairly considered, that decisions are not unduly discriminatory, and that the most efficient and cost-effective options are pursued.

State laws that interfere with utilities being able to engage in planning and coordination on a regional basis through participation in RTOs or ISOs will impair regional reliability by hindering the identification and construction of optimal regional grid expansion. The issue of appropriate incentives to encourage transmission expansion is a separate and important issue. In its proposed policy statement regarding transmission pricing incentives, the Commission proposed to target incentives for transmission expansion toward utilities that participate in RTOs in order to recognize the benefits that RTOs provide in terms of more efficient and cost-effective expansion and to encourage the timely realization of those benefits. The Commission is currently considering the comments that it has received on that proposal. However, whatever transmission pricing incentives are ultimately adopted by the Commission, pricing incentives for FERC-jurisdictional transmission service, by themselves, are unlikely to result in needed electric transmission infrastructure being built. The states have authority over siting of such facilities and over rates for bundled retail sales of electricity. It will take both federal and state action to get the job done.